

5 **ABSTRACT**

**IMMUNOCAPTURE-BASED MEASUREMENTS OF MAMMALIAN PYRUVATE  
DEHYDROGENASE COMPLEX**

The present invention is based on the discovery that an antibody specific for PDH  
10 complex can be used to immunoprecipitate PDH complex from the patient sample in an active  
state. Therefore the anti-PDH complex specific antibody can be used to determine the amount of  
and/or active state of PDH in a patient sample. The invention immunoassay methods for  
determining the amount and/or active state of PDH complex present in a patient sample are  
useful for screening to identify individuals having symptoms indicating malfunction of PDH  
15 complex. For example, the invention methods can be used to screen individuals for symptoms of  
onset of the diabetic state, such as insulitis, and for diagnosing late onset diseases, such as  
diabetes, Alzheimer's and the like.